

S. Proulx
Serial No. 09/913,977
Amendment

Page two

IN THE CLAIMS

1. (Currently Amended) A filter cartridge for filtering a slurry composition which comprises

a hollow housing having a first end including an inlet and a second end including an outlet, said hollow housing being filled with a depth filter and being free of an open void volume having a height greater than about one inch upstream of said depth filter, ~~which causes separation of a slurry into a particle component and a liquid component~~ said open void volume having a height less than about one inch.

2. (Previously Presented) The filter cartridge of Claim 1 wherein said depth filter is formed of segments separated by annular spacers, said spacers having a thickness less than about 0.12 inch.

3. (Previously Presented) The filter cartridge of Claim 2 wherein said depth filter segments comprise a wound depth filter comprising nonwoven fibers.

4. (Previously Presented) The filter cartridge of Claim 2 wherein said depth filter segments comprise a stack of sheets wherein each sheet comprises nonwoven fibers.

5. (Previously Presented) The filter cartridge of Claim 2 wherein said depth filter segments comprise a fibrous mass of nonwoven polymeric fibers secured together by mechanical entanglement of the fibers.

6. (Currently Amended) The filter cartridge of any one of any one of claims 2, 3, 4 or 5 wherein the ratio of depth filter segment thickness to spacer thickness is ~~from~~ from about 1.1:1 to about 5:1.

7. (Previously Presented) The filter cartridge of Claim 6 wherein the ratio of depth filter segment thickness to spacer thickness is from about 1.5 to about 3:1.

S. Proulx
Serial No. 09/913,977
Amendment

Page three

8. (Previously Presented) The filter cartridge of any one of Claims 1, 2, 3, 4 or 5 wherein the housing is free of an open void volume downstream of said depth filter.

9. (Previously Presented) The filter cartridge of any one of Claims 1, 2, 3, 4 or 5 wherein the depth filter inserted into the housing is precompressed into its final length.

10. (Withdrawn) The filter cartridge of any one of Claims 1, 2, 3, 4 or 5 wherein further comprising end caps secured to the ends of the cartridge by a mechanical device.

11. (Withdrawn) The filter cartridge of Claim 10 wherein the inner walls of the housing adjacent the ends of the housing have one or more slots formed therein, the end caps contain one or more C-rings and the C-rings secure the end caps to the housing by fitting at least partially into the one or more slots of the housing.

12. (Withdrawn) The filter cartridge of Claim 10 wherein the outer walls of the housing adjacent the ends of the housing have a flange formed thereon and the end caps are secured to the flange by a C-ring.

13. (Withdrawn) The filter cartridge of Claim 11 wherein the end caps are formed of two or more pieces known as the inner end cap piece and outer end cap piece and at least the inner end cap piece is secured by said to said housing.

14. (Withdrawn) The filter cartridge of Claim 13 wherein the outer end cap is secured to the inner cap piece.

15. (Previously Presented) The filter cartridge of any one of claims 1, 2, 3, 4 or 5 wherein the media has a surface treatment selected from the group consisting of hydrophobicity, hydrophilicity or a positive or negative charge.

16. (Previously Presented) A process for filtering a slurry which comprises passing a slurry through a filter cartridge as defined in any one of Claims 1, 2, 3, 4, 5, 7, 11, 12 or 13, and

S. Proulx
Serial No. 09/913,977
Amendment

Page four

recovering a filtered slurry from said cartridge.

17. (Original) The process of Claim 16 wherein said slurry is selected from the group consisting of a silica-based slurry, and alumina-based slurry, a ceria-based slurry, a diamond-based slurry, a MnO₂-based slurry, a cell broth, a photoresist chemical, a fermentation liquid, blood, a blood fraction and a transgenic liquid.

18. (Withdrawn) The filter cartridge of Claim 1 wherein the depth filter inserted into the housing is precompressed into its final length before insertion into the housing.

19. (Canceled) The filter cartridge of Claim 1 wherein the end caps are secured to the housing by a mechanical device.

20. (Canceled) The filter cartridge of Claim 1 further comprising the inner walls of the housing adjacent the ends of the housing have one or more slots formed therein, the end caps contain one or more C-rings and the C-rings secure the end caps to the housing by fitting at least partially into the one or more slots of the housing.

21. (Canceled) The filter cartridge of Claim 1 further comprising the outer walls of the housing adjacent the ends of the housing have a flange formed thereon, the end caps are secured to the flange by a C-ring.

22. (Canceled) The filter cartridge of Claim 1 further comprising the end caps are formed of two or more pieces known as the inner end cap piece and the outer end cap piece and the inner walls of the housing adjacent the ends of the housing have one or more slots formed therein and at least the inner end cap piece is secured by one or more C-rings at least partially fit into the one or more slots of the housing.

23. (Canceled) The filter cartridge of Claim 1 further comprising the end caps are formed of two or more pieces known as the inner end cap piece and the

S. Proulx
Serial No. 09/913,977
Amendment

Page five

outer end cap piece and the inner walls of the housing adjacent the ends of the housing have one or more slots formed therein, the inner end cap piece is secured by one or more C-rings at least partially fit into the one or more slots of the housing and the outer end cap piece is secured to the inner cap piece.

24. (Withdrawn) The filter cartridge of claim 1 wherein the media has a surface treatment selected from the group consisting of hydrophobicity, hydrophilicity, or a positive or negative charge.

25. (Withdrawn) The filter cartridge of Claim 12 wherein the end caps are formed of two or more pieces known as the inner cap piece and outer end cap piece and at least the inner end cap piece is secured by said to said housing.

26. (Withdrawn) A process for filtering a slurry which comprises passing a slurry through a filter cartridge as defined in Claim 11, and recovering a filtered slurry from said cartridge.

27. (Withdrawn) A process for filtering a slurry which comprises passing a slurry through a filter cartridge as defined in Claim 12, 3, and recovering a filtered slurry from said cartridge.